



FUTURE BATTLE DIRECTORATE SIGNIFICANT ACTIVITIES

27 March 1998

1. DCG conducted second meeting on Future Combat Vehicles (FCV) initiative on 19 Mar 98. Ft Knox briefed their vision for a ground system to help launch the effort to produce the first true AAN Platform. Meeting attended by LTC Conover. Next session set for 14 April. (LTC Conover, 2148)
2. Army Strategic Planning Guidance (ASPG) briefing by DAMO-SSP to CG scheduled for 18 March was cancelled at last minute. Working w/CPG to reschedule. ASPG links AAN to authoritative Army Planning Guidance to drive development of the Army Plan (TAP) 02-17. (LTC Conover, 2148)
3. Briefed AAN to Army Science Board Team studying Space Issues on 10 March 1998. Teams next stop is SMDC HQ to hear about Space Franchise activities. (LTC Conover, 2148)
4. Attended conference on "Manpower Issues at the End of the 20th Century" hosted by the Jewish Institute for National Security Affairs (JINSA) in Washington DC. Conference addressed security and resource issues for the U.S., Israeli, Indian, Chinese, Russian, and German armies as they prepare to enter the 21st Century. (LTC Echevarria, 3722)

5. Progress continues on “U.S. Army Culture in 2025.” This research effort considers the cultural underpinnings necessary for the Army’s continued operational and tactical success circa 2025. How do we create and maintain an army that can take initiative and act independently in an information-rich environment? (LTC Echevarria, 3722)

6. Progress continues on “Political-Military Insight & 21st-Century Warfare.” This study examines the political-military education requirements for Army After Next leaders. Civilian participants in the AAN wargames unanimously agree that future military leaders will require a thorough understanding of the political, psychosocial, and economic dimensions of conflict. How can we instill and cultivate a broad approach to military problem solving within the officer corps? (LTC Echevarria, 3722)

7. Progress continues on “Military Applications of Complexity and Chaos Theories.” This study considers what effect, if any, the current scientific revolution will/should have on the design and development of military organizations, doctrine, and training. In addition, the NDU is hosting a series of Complexity Conferences, January through March of 1998. LTC Echevarria will attend on behalf of FBD. (LTC Echevarria, 3722)

8. Completed revisions to article, “Strategic Preemption and the Army After Next: Crossing Tomorrow’s Deadly Zone,” (Co-authored with BG Buckley) for Military Review. (LTC Echevarria, 3722)

9. Initiating a study that will investigate the impact of speed upon information dominance. The study will examine information as a function of time. (LTC Echevarria, 3722)

10. Established contact with the MGFA (the German equivalent of CMH) to arrange for a presentation on combat motivation in the Wehrmacht. Presentation will take place in October 1998. (LTC Echevarria, 3722)

11. Established contact with the Canadian army equivalent of AAN. Will begin information exchange. (LTC Echevarria, 3722)

12. AAN STO Enhancement Program. During the period 6-10 March, 30 AAN STOs were presented to the Director, FBD for endorsement. All were judged to have merit for the AAN and thus were favorably endorsed to AMC. These AAN STOs will now compete for additional developmental funding in the annual STO Review Process. Submissions were received from TARDEC, AMRDEC, ARDEC, ARL, ARI, Natick and CECOM. (Mr. Klevecz)

Updated Input – 27 Feb 98

13. NATO Land Operations 2020 Study. The NATO LO 2020 Study will conduct a Technology Seminar Wargame (TSW) will be held 3-13 Mar 98 at DERA, Fort Halstead, Kent, United Kingdom. The TSW is a major activity in the LO2020 Study. The TSW will assess proposed weapons systems that contain future technologies now being developed for application in NATO land forces in 2020. The output of the TSW will rank battlefield systems, thus ranking the technologies contained in the systems. The TSW results will provide information to focus research and development funding. The TSW is one exercise in a series of activities that will ultimately satisfy the objectives of LO2020 Study. FBD provided four proposed AAN systems to the Study Group, one of which (Advanced UAVs) will be played in the TSW. LTC Cronin is the sole US/TRADOC representative player on one of the Blue Force Teams. There will also be a combined Military Steering Group/Technical Study Group meeting on 11 Mar 98 at the TSW site, Fort Halstead, Kent, United Kingdom. The purpose of the meeting is to discuss the Working Paper structure and assignments by lead nation responsibility. The Working Paper will be the turned into the Final Report Paper for the Long Term Scientific Study 49, Land Operations for the Year 2020. The Study Director has proposed that the US Army to develop and annex in the final report that identifies lessons learned from Force XXI and AAN investigations. LTC Cronin is the USA/TRADOC representative to the Military Steering Group. (LTC Cronin, 2746)

New Input 15 Jan 98

14. Technology Azimuth Proposal for SpWG. Met with Wargaming Directorate to discuss a draft constructs for the Technology Azimuth. Proposal presented: Focus on one focused area for a workshop during the wargame (non-lethal or MOUT are potential topics). Identify approximately three technology assessors/observers to support assessment cell. Identify technology advisors/observers to support up to five key player cells; one of these would serve as the National Science Advisor on the Blue Strategic Cell.

Prepare and present a consolidated Tech Cell Output briefing for senior technologists on 29 Apr.

Prepare and present a Tech Cell briefing at the Senior Leader Seminar on 30 Apr.

The initiative to develop a video “A day in the life...” is being worked by BAH (Mr. Hamby)

Will work finalizing this proposal with FBD and Wargaming Directorate (LTC Franke, 3758/Linda Musa, 3182)

Updated Input – 15 Jan 98

15. SMDC sponsored the first Space Integrated Idea Team (IIT) at Ft. Belvoir, VA from 9-11 Dec. The primary purpose of the IIT was to provide an opportunity for individuals from the military and commercial space communities to dialogue and exchange information about military implications of the future space environment. Representatives from Coleman Research Corporation facilitated the activities through the use of three panels dedicated to space policy, operational concepts and technology respectively. SMDC will test the concepts and ideas generated by the IIT during Space Game II, 28 Jan – 6 Feb 1998. SMDC/Coleman will produce a preliminary report on the major issues that surfaced throughout the IIT process in approximately 2 weeks. (LTC Hahn, 4436)

Updated Input – 27 Feb 98

16. FY98 Tactical Wargame (TWG). The two week wargame (17-21 Nov and 1-5 Dec 97) at TRAC Ft Leavenworth, KS was a free-play wargame to explore tactical issues under investigation for the AAN Military Art azimuth and to support future AAN wargaming efforts. The TWG merged the expertise and efforts of over 150 personnel from the US Army, US Air Force, US Marine Corps, USMA, DOD agencies, industry and academia. What was conceived to be a Wargame conducted at a tactical level quickly evolved into a hybrid Wargame that straddled the not so clear boundaries between the operational and tactical levels of war. The joint nature of the battles and the requirement for interdependent activities of numerous agencies reinforce this shift to a higher level. The TWG presented some challenging ideas on how we conduct operations today and what needs to change as the use evolving and predicted technologies can support a changing vision on the conduct of warfare. The TWG Final Report will be published by TRAC on 15 Mar 98. (MAJ DeMeyere, 4436/LTC Cronin, 2746)

New Input – 3/18/98

17. National Defense Industrial Association/US Arm TACOM Logistics Data Symposium, 15-17 April 1998. Theme for this symposium: “Reinventing Logistics—Thinking Outside the Box.” Currently LTG Kern and COL Gay have accepted the invitation to be a speaker at the symposium. (LTC Franke, 3758/Linda Musa, 3182)

Updated Input – 27 Feb 98

18. TRADOC, US Army Space and Missile Defense Command (USASMDC) and the National Reconnaissance Office (NRO) are conducting the Army After Next Space Game Two (SG2). SG@ was hosted by the Army Space Command (ARSPACE) in Colorado Springs, CO, 28 Jan-6 Feb 98. The space games provide insight to assist in the development of a vision of future space warfare, and thus space’s role in land warfare in 2020 and

beyond. The game was conducted in four moves followed by a Senior Seminar that considered the results of the game play. Post game analysis will be published in a Space Game Two Emerging Impressions Report and a Final Report. (MAJ DeMeyere, 4436)

Updated 27 Feb 98

19. The Army Experimentation Campaign Plan (AECPP) is a HQ TRADOC initiative to define post-DAWE experimentation campaign plan for five axes of experimentation, a continuation of the journey in the Force XXI Process to change the Army. The five axes are AXXI Division; EAD/Corps/EAC AXXI; Contingency Forces; Strike Forces; and AAN. Issues of digitization and modernization must be addressed for AC and RC, and light as well as the heavy forces. Emerging ideas and desired capabilities for the Army After Next and Strike Force must also be addressed. Each axis initiated efforts to develop a campaign plan with milestones for their respective axis. A decision briefing to the CSA is tentatively scheduled for 15 May 1998. (LTC Cronin, 2746)

20. Spring Wargame 1998. Attended the first Spring Wargame IPR at Booz-Allen and Hamilton's headquarters in Tyson's Corner, VA. Representatives from all of the major organizations participating in the SWG were at the IPR. With COL Rodriguez, WGD, presiding, Bill Hogan, Booz-Allen, presented an overview of the objectives, scenario, structure, and staffing requirements for the SWG. Copies of IPR briefing documents are available from LTC Hahn or Mr. Mock. LTC Jim Realini, USAJFKSWCS, also presented an overview of ARSOF Game #2 at the conclusion of the SWG IPR. The next SWG IPR is scheduled for 0900 hrs, 18 Feb 98 at Collins Hall, USAWC, Carlisle Barracks, PA. (LTC Hahn, 2046)

21. The USMC will sponsor a RMA/Urban Warfare Workshop at the SAIC headquarters in McLean, VA on 29-30 Jan 98. The purpose of the workshop is to create a draft concept for urban operations that is applicable for a wide range of political-military circumstances and urban environments. RMA/UW efforts will compliment those of the AAN Urban Warfare Project and the ongoing J8/LLWAD study on MOUT-JV 2010 for the JROC. (LTC Hahn, 2046)

22. DCG's Transition White Paper. LTC Conover, LTC Cronin, LTC Hahn and Mr. Mock attended the AOE to AAN Transition White Paper meeting on 3 Feb 98. LTC Hix, Office of the DCG, who is the primary author of the DCG's White Paper, sponsored the meeting. DCSCD was represented by LTC Leonhard (primary author of the TRADOC Pam 525-5 update), LTC Bunch, and Mr. Mazzanti. The White Paper will address a wide range of topics associated with AXXI, AAN, and the newly designed Strike Forces. The paper will outline and compare organizational structures, equipment,

and operational concepts for all three types of forces and then present a transition strategy to move the Army from AOE through AXXI and Strike Forces to AAN. Of particular interest will be the sections of the paper that specify which brigades/regiments/divisions will transition to Strike Forces (and AAN battle forces) and which weapons systems currently under development will contribute to Strike Forces and AAN forces. LTC Hix expects to have a final draft of the paper for review NLT 10 Feb for presentation to the DCG on 12 Feb. (LTC Hahn, 2046).

23. Work progresses on an analysis with MAJ Diane Vanderpot, DCSINT, to consider the organizational effectiveness of potential threats during the 2020 time frame. We will assume that potential enemies intelligently procure a potentially effective mix of modern weapon systems, and our analysis will focus upon how well they can operate, employ, command, and control them. We will look at current trends concerning capabilities, culture, society, professionalism, etc., and we will extend them out as far as we feel valid. Then we will make worst case judgments about their capabilities in 2020. The states we will initially consider are Iran, China, and India. Of particular interest is the trend toward increasing complexity and difficulty ref coordinating and orchestrating the various BOSs, service systems, etc, and simultaneous trend toward increasing simplicity ref operating weapon systems and weapons platforms. The U.S. may maintain its advantage in the former but lose some of its relative advantage in the latter. Combined with an appropriate battle command philosophy, tactics, and judicious choice of technology, potential enemies could be extraordinarily dangerous even if the U.S. maintains uncontested overmatch ref integrating and orchestrating systems and “systems of systems.” (MAJ Bieber, x4282)

24. Working with the Department of Systems Engineering at the United States Military Academy on a project concerning Uninhabited Aerial Vehicles during the Army After Next time frame. Will finish the initial study at the end of February, and in consultation with Future Battle Directorate. Beginning work on the themes that we will develop fully for the final brief TBA during the week of 4-8 May. (MAJ Bieber, x4282)

25. LTG Vollrath, ADCSPER, will host a 24-26 June 98 workshop addressing human and organizational issues during the AAN time frame. After LTG Vollrath's issues initial guidance, will begin working with the DCSPER futures group and Army Research Institute (Research Advanced Concepts Office) to develop themes. (MAJ Bieber, x4282)

26. Currently learning about automated decision aids for the AAN era. Will assess feasibility and offer recommendations about future research effort that will yield the systems that will enable decision-makers and planners to achieve the physical agility envisioned in Knowledge and

Speed. Currently in contact with Los Alamos Laboratory in New Mexico and Aviation Applied Technology Directorate, FT Eustis. (MAJ Bieber, x4282)

27. Participated in the ARSOF AAN War Game II at FT Bragg during 23-27 February. Served in the human dimension section of the Assessment Cell. Assessed variables that ranged from psychological resilience on the battlefield to public reaction to battlefield casualties. The game yielded few surprises in the human and organizational behavior azimuth, but the enemy's direct attack (multi-dimensional to include cyber and bio) on the US homeland was the first of its kind in an AAN war game. The human dimension cell's assessment of this attack was a galvanization of American public opinion that demanded major military action to ensure 1) the perpetrators were punished, and 2) that they do not attack again. (MAJ Bieber, x4282)

28. The ASB Study Group "Human Behavior in Combat" is writing its report to the CG TRADOC. The Group intends to present the report to the CG in June 1998. The report will consider whether more accurate human and organizational representations should and can be integrated into the Army's various models and simulation. The group finished fact-finding in December 1997 and is writing its report. MAJ Bieber is serving as a government advisor and the staff assistant for this study group. (MAJ Bieber, x4282)

29. Will participate in the AAN Spring War Game at Carlisle Pennsylvania 20-30 April 1998. Will serve in the human dimension section of the Assessment Cell. Will assess variables that range from psychological resilience on the battlefield to public reaction to battlefield casualties to market reactions to political and military decisions. The cell will contain MAJ Bieber, Dr. Mike Sanders (ARI Psychologist from SOF), COL(R) Mike Shaler, and two instructors from the Department of Social Sciences at USMA. Currently designing assessment methodologies. (MAJ Bieber, x4282)

30. Currently researching and writing a paper entitled "Design Considerations for Future Military Organizations." Will jointly author the paper with BG(R) Huba Wass de Czege. The paper will offer organizational innovations conceived by BG(R) Wass de Czege and others and consider the environment and circumstances necessary for such organizations to succeed. Paper is now moving from outline form to writing. Should produce a polished draft by 1 April. (MAJ Bieber, x4282)

Updated Input – 26 Feb 98

31. Urban Warfare Workshop. The Marine Corps Combat Development Command (MCCDC) and SAIC hosted an RMA Urban Warfare Workshop in

McLean, VA on 29-30 Jan 98. LTC Hahn attended the workshop on behalf of AAN. The purpose of the workshop was to develop a draft "Concept for the Conduct of Future MOUT Operations" that addresses a wide range of urban environments and missions. The draft concept presented for analysis during the workshop outlined a four phased operation (isolate, penetrate, consolidate, and transition). The major alternative operational approaches developed at the workshop to implement this concept all relied heavily on the deployment of small units with superior urban situational awareness, high-speed urban mobility assets, and precision weapons. Workshop participants struggled (largely unsuccessfully) to develop a single operational concept that would support full-spectrum MOUT. The final report of the workshop is due out at the end of March 1998.

32. Spring Wargame IPR, 18 Feb. WGD hosted a Spring Wargame IPR at Carlisle Barracks on 18 Feb 98. The IPR included an admin/log briefing, a briefing of the SWG scenario, a review of the game structure, an update on the SOF Game, and an outline of the logistics support and assessment activities. Major ongoing projects include the development of the Blue force (LTC Cronin) and the Red force (NGIC), the resizing of various wargame cells, the recruitment of participants, the format for the Pol-Mil game (23-24 Mar) and the preparation of a detailed SWG briefing for the DCG (12 Mar). The next Summer Wargame IPR is scheduled for 19 Mar, location TBD. The IPR will include a full briefing on the Blue force structure (LTC Cronin). (LTC Hahn, 2046)

New Input – 26 Feb 98

33. NDU European Symposium. NDU hosted a symposium entitled "NATO 2010: A Strategic vision" on 10-11 Feb. LTC Hahn and MAJ Ricklef attended the conference on behalf of DCSDOC. The symposium included 4 panel discussions and major addresses by Vice Admiral Ian Garnett, Deputy Supreme Allied Commander Atlantic, Ambassador Yuli Vorontsov, Ambassador of the Russian Federation to the U.S., and Ambassador Robert E. Hunter, former US Ambassador to NATO. Recurring themes at the symposium included the likelihood of the future expansion of NATO, the need to strengthen transatlantic links and the increasing need to create a new NATO strategy to deal with operations on the periphery and "out of area." The Russian ambassador offered a provocative dissenting view that NATO will have disappeared by the year 2010. (LTC Hahn, 2046)

34. Defense Science Board Task Force on Coalition Warfare. The Center for Strategic Leadership at Carlisle Barracks hosted a "JV2010/AAN Implications for Coalition Operations" seminar on 19-20 Feb. The seminar was designed to prepare the AWC International Fellows for their presentation to the DSB at Carlisle Barracks on 3 Mar 98. DCSDOC participants included LTC Gabriel, LTC Hahn, LTC McCallum, and Mr.

Rittenhouse. LTC McCallum also presented a briefing on Army Futures Initiatives. Major concerns of International Fellows included technical compatibility of C4I systems, multinational/joint training activities, and US willingness to share command and control responsibilities. (LTC Hahn, 2046)

35. RAND MOUT Conference, 24-25 Feb. RAND Arroyo Center and US Army Dismounted Battlespace Battle Lab (DBBL) co-hosted a conference entitled "United States Military Operations On Urbanized Terrain Readiness, 1998-2025" in Washington, DC on 24-25 Feb. LTC Hahn attended the conference on behalf of FBD. The purpose of the conference was to review the existing state of US preparedness for MOUT operations and to examine a RAND operational concept proposal entitled "Offset MOUT." This concept attempts to outline ways in which the US technological advantage can be used to reduce the need for close combat in urban areas. Offset MOUT requires significant improvements in C4I/situational awareness systems, precision weapons for urban areas and urban battlefield tactical mobility. A significant majority of conference participants had difficulty conceptualizing MOUT operations beyond the "streetfighter" model. RAND will issue the final report of the conference in late March. (LTC Hahn, 2046)

36. AAN MOUT Study Update. Dr. Robert L. O'Connell, National Ground Intelligence Center (NGIC), has completed his study of MOUT operations and issued the "AAN MOUT/MOBA White Paper" dated 20 February 1998. The White Paper addresses the nature of the future urban environment and classifies urban areas as either developing or developed cities. The paper also outlines a concept of military operations that emphasizes speed, mobility, and the employment precision weapons from small aerial and robotics platforms. The major challenges of employing this approach to MOUT will continue to be associated with command and control throughout the urban area. Dr. O'Connell will participate in the Spring Wargame as a member of the MOUT Analysis Cell (MAC). COL (Ret.) Jimmy Walters, BAH, and LTC Hahn will also be members of SWG MAC. COL Walters is currently working on the MOUT-JV2010 study for J8, Land & Littoral Warfare Division. (LTC Hahn, 2046)

Update – 5 Mar 98

37. Spring Wargame Force Laydown. The Blue Force Laydown for all Services and the Allied Nations participating was briefed to the DCG during the IPR on 18 Mar 98. Inputs have been received from all Services. The DCG also received information on the Battle Force Concept of operations with insights from previous AAN wargames. (LTC Cronin, 2746 / MAJ DeMeyere, 4436)

38. Attended the Aerospace Future Capabilities Game (AFCG), Workshop

III, 27 Feb 98. The OPR for the AFCG is HQ, USAF, XPXC, Future Concept Development Division, COL Jim Engle. This was the third in a series of workshops and was held at SAIC, Tower I in McLean, VA, in the 1st floor conference room. The purpose of this workshop was to conduct a tactical level workshop focused on UAV structure requirements for the AFCG, 18-22 May 98, at the Bolger Leadership Center, Potomac, MD. The purpose of the AFCG is to set the context for USAF strategic investment strategy. Specific objectives are to evaluate strengths and weaknesses of future capabilities contemplated by USAF LRP, Mar 97 and to test alternative paths in future warfighting environments. The three USAF Force Structures are: Baseline Force; defined at 2nd workshop, based on USAF MAJCOM MAPS. Alternative force structures are: Extended Range Force (ERF) and Space-Heavy Air Force (SHAF). The AFCG is a five-day iterative, adjudicated wargame. Expected major output is preparation of brief for the BOD showing insights into strategic investment strategy. The game structure will include a higher authority team be led by Tony Lake, former NSA. This team will have a Green Team, Ops/Intel Team and Logistics Team. There will be three Blue Teams whose leaders are proposed to be: MG ® Link – Baseline Force; LTG ® Croker – Extended Range Force; MG ® Jones – Space-Heavy Air Force. There will be three Red Teams and three Assessment Teams. Assessment Team will be lead by LTG ® Hosmer. Draft scenario (anti-access strategy) and campaign plans for Blue and Red will be available by next week. The AFCG is being facilitated by the Gaming and Foreign Research Division of Science Applications International Corporation (SAIC). Senior facilitator is Mr. Ron St. Martin. The U.S. Army, USMC and USN are requested to provide up to 14 players. Requested players should be O-4/O-5 equivalent. Request at least one O-6 player to participate in the Political Workshop and be senior service representative for the Concluding Seminar on the final day of the game. Suspense for player/participant names is 2 Mar 98. The next workshop is 12 Mar 98 on logistics requirements.

The workshop went exceedingly well. The scenario appears to be completely consistent with Knowledge and Speed and other AAN documents. Specifically, the Air Force will confront a force that emphasizes preventing access into the operational area. The Air Force participants also demonstrated significant concern for the “how” and “what” of the AAN and how the Air Force will help meet the AAN’s information needs. Of particular note, virtually all UAVs in the game will belong to the Air Force. On 27 March, the Air Force will hold a one-day meeting to offer a description and rationale for the force structure that the Air Force will use in the game. (MAJ Biever, x4282)

New Input – 5 Mar 98

39. Technology Seminar Game, PAT Meeting, 23 Feb 98. SARDA held a PAT meeting at SAIC on 23 Feb 98 to review planning efforts and discuss issues related to their proposed Technology Seminar Game. SAIC briefed

their work breakdown structure and tasks, their initial efforts to develop an analytic framework, and demonstrated a system dynamic model that they intend to use to support the game. Col Lavine, SARDA, subsequently assigned government representatives to correspond to major task areas for SAIC. Areas where SARDA desires TRADOC/AAN/CD help includes the following: development of the Red and Blue forces and scenarios based upon prior AAN work, and identification of personnel to participate on the Blue game panels. They also requested that we go back to our principle –CG/DCG TRADOC- and provide him the opportunity to nominate additional persons for the Senior Review Group. AAN Technology Office is currently working AAN Imperatives and guidance for the game. Next PAT meeting is scheduled for 9 March 98. POC this action is LTC Jim Bray at extension 5422 or email brayj@monroe.army.mil.

40. Precision Guidance of Small Diameter Weapons Conference, 3-4 March 98. U.S. Army Aviation and Missile Command, Redstone Arsenal hosted a conference on Precision Guidance of Small Diameter Weapons on 3-4 March 98. The objectives of the conference were: First, to provide a forum for both the user and developer communities to access progress and identify gaps and issues in providing the Army, Navy, Air Force, and Marines with precision guidance small diameter missiles and submunitions suitable for actions at the lower intensity end of combat. Second, to provide a focus for advances in small, low cost, lightweight sensors and signal processors on future warfighting needs. And third, highlight the potential applications of microelectromechanical systems technology. Name for this workshop was misleading. Eighty percent of the briefings focused on near term enhancements for the 2.75 inch rockets to meet requirement outlined by Fort Rucker. Briefings that had more applicability to AAN included: Micro UAV briefing by DARPA; Uncooled IR Sensors briefing by Raytheon; and briefings on MEMs technology. POC this action is LTC Jim Bray at extension 5422 or email brayj@monroe.army.mil.

41. The Fires Integrated Idea Team Kickoff meeting was held 11-13 March 1998 at the Ramada Inn Conference Center in Newport News, VA. The meeting was jointly sponsored by Future Battle Directorate and the U.S. Army Research Laboratory. The meeting was designed to orient the IIT on the inquiry for Fires for the AAN and to begin the dynamic interaction among the IIT members that will inform the AAN Process. (MAJ DeMeyere, 4436)

42. BAST Study on Logistics Support to the AAN. The National Research Council's Board on Army Science and Technology (BAST) is continuing their study of logistics support to the AAN. The committee met on 19 February for final fact-finding discussions and initiation of the writing of the final report. The committee report should focus on discussions of

advanced technology with favorable impact on fuel efficiency, propulsion, mechanics, power, electronics, materials and structures. As this meeting occurred at the same time the U.S. National Command Authority was planning a response to the latest Iraqi resistance to UN inspections, the committee members indicated that they were studying the US planning process as a precursor to similar future processes involving the AAN. The committee discussed battle rhythm logistics debating how to modulate pulse and pause of combat, discussing how AAN combat pulse differed from historical combat pulses and discussed the impact on logistics of the availability of an infinite-capacity, renewable, zero-space energy source. The committee debated the fundamental operational advantages, the technological merits and other significant factors (cost, production improvements, etc.,) for a series of technologies reviewed at selected National Laboratories. Finally, the DARPA's Advanced Logistics Project captured the committee's attention. The objectives of the Advanced Logistics Project, which include development of an automated logistics planner and real-time logistics situation assessment tool, appealed to the committee member. (Mr. Klevecz)

43. COL Lavine, SARDA, met with COL Starry, COL Gay, COL Mehaffey, and LTC Bray on 12 Mar 98 to discuss the Technology Seminar Game. The discussion centered on proper linkage to Army After Next and delivery of a useful product. The game will make use of prior AAN work to paint the picture of possible warfare circa 2025. This will focus on the question: "What can technologies do to begin delivering AAN type capabilities starting in 2010 and beyond. (LTC Bray, 5420)

44. LTC Bray briefed "AAN Emerging Impressions" to the TARDEC Directors on 17 Mar 98 at Warren, MI. Briefing was well received. There were some concerns and questions concerning TRADOC ICTs and their relationship to AAN: "Are the ICTs moving to develop concepts to meet AAN's vision or are they disconnected?" (LTC Bray, 5420)